## REMARKS AND ARGUMENTS

These remarks are set forth in response to the office action mailed October 22, 2004 (the "Office Action"). As this reply has been timely filed within the three-month statutory period, neither an extension of time nor a fee is required. Claims 1 through 23 are presently pending in the Patent Application. In the Office Action, claims 1-3, 5-6, 8-10, 12-13 and 15-23 have been rejected under 35 U.S.C. § 102(b). Claims 4, 7, 11 and 14 were rejected under 35 U.S.C. § 103(a).

I. Brief Review of Applicant's Invention

Applicant's invention concerns dynamic allocation of channel processors used in broadband base stations. More particularly, a plurality of channel processors are allocated to a transceiver for processing traffic channels contained on a frequency channel. Importantly, the channel processors are not assigned to specific traffic channels. Instead, each channel processor is configured to be operable on any of a plurality of traffic channels. In response to notification of a call to or from a subscriber in a cell with which the transceiver is associated, a determination is made to identify which of the channel processors are available for processing the call. The call is then assigned to any one of the available channel processors.

II. Rejection under 35 U.S.C. § 102(b)

In the Office Action, claims 1-3, 5-6, 8-10, 12-13 and 15-23 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,670,899 to Brody et al. ("Brody"). However, Applicant believes the Examiner may have misunderstood the

teachings of Brody in making the foregoing rejection. Accordingly, it is believed that a brief review of the Brody reference may be helpful for assisting the Examiner in recognizing the differences between that invention and the invention recited in Applicant's claims.

Brody addresses the problem of balancing loading of cells in a cellular mobile telephone system. Channel utilization is determined in each cell and calls handled by cells with higher voice channel occupancy levels are handed-off to adjacent cells with lower voice occupancy levels. Importantly, each of the cells contains its own base station (T9, T2, T3) having respective transceivers. Thus, rather than allocating channel processors within a single transceiver for processing calls, Brody is directed to transferring calls from one transceiver to an entirely new transceiver in a different cell. Accordingly, Brody's load balance is only applicable in the circumstance when a mobile telephone is located in a region of cell area overlap, which typically is limited only to a very small percentage of a transceiver's coverage area.

Claims 1 and 8 each recite determining a number of pooled available channel processors which are unused in a broadband base station (BBS), selecting any of the available channel processors for processing of a call, and assigning a call to the available channel processor which has been selected. Brody does not disclose these limitations. Brody discloses dynamic frequency allocation to the transceivers, but each transceiver is still allocated to a particular geographic cell and can only process calls from that cell or an adjacent cell. Abstract; Col. 7, lines 4-8; Col. 12, lines 14-18. Moreover, calls can only be handed off from a first transceiver to a second transceiver in an adjacent cell if the call originates from a mobile transceiver in a region in which the geographic regions of the first and second transceivers overlap. Col. 7, lines 18-24; Col. 11, lines 3-7. In contrast, claims

1 and 8 recite that channel processors are assigned to process calls from mobile units in any cell served by the BTS.

Claims 2 and 9 recite decrementing the number of available channel processors by one after a call is assigned to a channel processor. Claims 3 and 10 recite the step of rejecting a call if all of the channel processors are in use. Further, claims 4-6 and 11-13 recite tracking the number of available channel processors. The Examiner has asserted that each of these claim limitations is disclosed by Brody. However, Brody identifies the number of available transceivers, not the number of available channel processors. Transceivers are not synonymous to channel processors, as further described below with reference to the rejection of claims 19-22.

Regarding claims 18 and 23, each of these claims recites the limitation of allocating to a transceiver assigned to a cell a first plurality of channel processors for processing traffic channels contained on a frequency channel. The Examiner asserts that Brody discloses this limitation in Fig. 2 and at col. 9, lines 40-68 and col. 9, line 56 – col. 10, line 15. Applicant respectfully disagrees with the Examiner's assertion. Nowhere does Brody teach or suggest assigning a plurality of channel processors to the transceivers.

In the rejection of claims 18 and 23, the Examiner equates the term "cell site controller" with the term "transceiver," but the terms are not synonymous. As defined in Applicant's specification, a transceiver is capable of providing upconversion and downconversion of a portion of RF spectrum between a given band-of-interest for a sector module and an intermediate frequency (IF). Brody's cell site controller does not perform such functions. Instead, Brody discloses that the cell site controller exchanges control information with transceivers. Col. 10, lines 16-19. Moreover, to equate the terms "cell site controller" and "transceiver" is contrary to the meanings of the terms as understood by

those skilled in the art. Thus, it is erroneous to assert that Brody's cell cite controller are equivalent to Applicant's channel processors.

Claims 18 and 23 also recite determining if there is at least one of the first plurality of channel processors available for processing a call in response to notification of the call, and assigning the call to any one of the first plurality of channel processors that is available. Brody wholly lacks any teaching or suggestion of these limitations. Instead, Brody merely actuates specific transceivers for handling calls.

The Examiner also has rejected claims 19-22, asserting that each of the recited claim limitations is disclosed by Brody. Claim 19 recites the step of assigning at least a second plurality of channel processors to the transceiver if there is not an available channel processor among the first plurality of channel processors. Claim 20 recites the step of rejecting the call if all of the channel processors assigned to the transceiver are in use and there are no further channel processors available to be allocated to said transceiver. Claim 21 recites the step of incrementing a number of available channel processors in the cell when the call is terminated. Finally, claim 22 recites the step of decrementing a number of available channel processors in the cell when the call is assigned to one of the channel processors.

In the rejection of claims 19-22, the Examiner has relied upon the erroneous equivalency of the terms "transceiver" and "channel processor." As defined in Applicant's specification, a transceiver is capable of providing upconversion and downconversion of a portion of RF spectrum between a given band-of-interest for a sector module and an intermediate frequency (IF). On the other hand, as defined in Applicant's specification, channel processors do not perform such upconversion and downconversion. Instead, the channel processors perform specific signal processing functions on channelized data. For

example, as described, the channel processors can remove correction and encryption algorithms placed in traffic signals to make the signals more robust during transmission. Further, the channel processors also can add correction and encryption algorithms to the traffic signals (page 12, lines 15-29). Such operations are not performed by transceivers. Moreover, the channel processors are described by Applicant as being contained in DSP modules 40a-40n, which are independent of the transceiver 28a. As shown in Fig. 1, the DSP modules 40a-40n are distinct from the transceiver 28a and, indeed, communicate with the transceiver 28a via TDM buses 32, 36 and a channelizer/combiner 30a. Thus, Brody's VCO transceivers are not equivalent to Applicant's channel processors. Accordingly, Brody fails to anticipate claims 19-22.

III. Rejection under 35 U.S.C. §103(a)

Claims 4 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brody in view of known prior art. Claims 7 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Brody in further view of U.S. Patent No. 6,278,875 to Sun ("Sun").

Claims 7 and 14 recite handing over a call from a first cell of a BBS to a target cell of the BBS and continuing to process the call on the available channel processor which has been selected and assigned prior to the step of handing over the call. The Examiner asserts that this limitation is disclosed in Sun. Specifically, the Examiner indicates that Sun's traffic channel element (TCH) is equivalent to the recited channel processor and that the TCH performs the recited call processing step. However, Applicant respectfully disagrees. Rather than processing calls on traffic channels, the TCH instead performs traffic channel allocation. Col. 4, lines 55-58. Indeed, the TCH communicates with call

processing software to allocate traffic channels, but does not execute the call processing software. Id. Thus, the TCH is not equivalent to the claimed channel processors.

Claims 4 and 11 are believed allowable at least by virtue of their dependence on an allowable base claim.

## IV. Conclusion

For the foregoing reasons, this entire application is believed to be in condition for allowance. Consequently, such action is respectfully requested. The Applicant requests that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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